

Section 3: Senate Bill X₇₋₇ Compliance

On November 10, 2009, California Governor Arnold Schwarzenegger signed into law a comprehensive water package made up of four bills, including Senate Bill X₇₋₇ (SB7). SB7 mandates conservation targets for all urban retail water entities supplying potable municipal water to more than 3,000 end users or delivering more than 3,000 acre feet of potable water per year to end users. The conservation targets of 10 percent by 2015 and 20 percent by 2020 on a gallons-per-capita-per-day (gpcd) water use basis must be complied with in order to be eligible for state water grants and loans. Vallecitos Water District (VWD) is not subject to agricultural-related provisions of SB7 since VWD supplies agricultural water to less than 10,000 acres.

This section includes analysis for both VWD baselines and targets, as well as Regional Alliance targets to meet SB7 mandates for 2015 and 2020. Section 2.55 of the California Water Code allows agencies to form a Regional Alliance and establish a regional target to satisfy SB7. The Regional Alliance includes three additional water agencies, Olivenhain Municipal Water District (OMWD), San Dieguito Water District (SDWD), and Rincon del Diablo Municipal Water District (Rincon MWD). A “Cooperative Agreement to Establish and Carry Out a Regional Alliance in Accordance with Part 2.55 of the California Water Code” is attached in Appendix H.

3.1 Baselines and Targets

In accordance with California Water Code (CWC) §10608.20(b), there are four methods available to VWD to determine urban water use targets:

1. 80 percent of baseline per capita water usage
2. Per capita daily water use as the sum of
 - a. 55 gpcd plus dedicated irrigation,
 - b. the Model Water Efficient Landscape Ordinance water efficiency equivalent, and
 - c. Commercial, Industrial, and Institutional (CII) use equivalent to 90 percent of baseline CII water use by 2020
3. 95 percent of the applicable state hydrological region target as set forth in California’s draft 20 X 2020 Water Conservation Plan
4. An approach developed by the California Department of Water Resources (DWR)

VWD chose the first method (80 percent of baseline per capita water usage) and calculated the baseline and target gpcd consistent with guidance provided by the California DWR and California Urban Water Conservation Council in accordance with CWC §10608.20(h)(1). The calculation, presented below in Table 3-1, results in a baseline per capita water usage of 199.2 gpcd. Explanations of the components of the calculation are as follows:

Fiscal Year End

CWC §10608.20(a)(1) allows water use targets to be determined on either a fiscal year or calendar year. VWD chose to use its fiscal year, which starts on July 1 and ends on June 30. “Fiscal Year End” is defined as the fiscal year ending on June 30 of the stated year.

Baseline = 199.2 GPCD
2015 Target = 179.3 GPCD
2020 Target = 159.4 GPCD

Distribution System Population

CWC §10608.20(f) requires that population data be determined using federal, state, and local population reports and projections. VWD used data compiled and reported by the San Diego Association of Governments (SANDAG) from their Series 12 projections for fiscal years ending in 1995 through 2010.

Daily System Gross Water Use

CWC §10608.12(g) defines “daily system gross water use” as the total volume of water entering the distribution system, excluding recycled water, wholesale water sold and agricultural water, and the net change in water storage. VWD’s sole source of “daily system gross water use” is imported wholesale water. Million gallons per day (MGD) of “daily system gross water use” = total water supplied + decrease in water storage – increase in water storage – agricultural water use.

Average Daily per Capita Water Use

The average daily per capita water use is calculated by dividing the volume of “daily system gross water use” (in MGD) by the population, then multiplying by 1,000,000 to convert the figure to gallons.

Average gpcd – 10-Year

Guidance provided in the California DWR’s “Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use” (DWR Guidance) requires use of a

continuous 10-year period ended no earlier than December 31, 2004, and no later than December 31, 2010, to calculate Baseline gpcd. Table 3-1 calculates all possible 10-year periods over which an average can be used as the baseline. The time frame of fiscal years ending in 1999 through 2008 yields the greatest average usage at 199.2 gpcd and is therefore selected for VWD's baseline. Although VWD supplies a significant amount of recycled water to neighboring agencies, no recycled water is sold by VWD. Therefore, VWD cannot use the longer 15-year averaging period as allowed per DWR Guidance.

Target GPCD Reductions

CWC §10608.16 mandates that VWD achieve a 20 percent reduction from baseline usage by 2020 and an incremental reduction of 10 percent by 2015. VWD has calculated the 2015 target (90 percent of baseline per capita water usage) at 179.3 gpcd, and the 2020 target (80 percent of baseline per capita water usage) at 159.4 gpcd. These baseline and target figures were developed individually rather than on a regional basis.

The actual capita daily water use for the fiscal year ending in 2010 is 154.6 gpcd, which is already below the 2020 target. The current water conservation goals have effectively provided the reduction necessary to comply with SB7. Best management practices delineated in Section 7 present VWD's plan to maintain conservation to ensure that the demands do not increase again if drought alert levels are decreased and water awareness wanes.

Table 3-1: Base Daily per Capita Water Use – 10-Year Range

Base period year		Distribution System Population	Daily System Gross Water Use (MGD)	Average Daily per Capita Water Use (gpcd)	Average gpcd 10-Year
Sequence Year	Fiscal Year End				
Year 1	1995	50,149	8.81	175.6	
Year 2	1996	51,974	10.06	193.6	
Year 3	1997	53,865	10.45	193.9	
Year 4	1998	55,825	9.59	171.8	
Year 5	1999	57,856	10.73	185.5	
Year 6	2000	59,968	12.48	208.1	
Year 7	2001	60,481	12.08	199.7	
Year 8	2002	64,154	13.33	207.7	
Year 9	2003	67,191	13.41	199.6	
Year 10	2004	70,668	14.91	211.0	
Year 11	2005	75,992	14.30	188.2	195.9
Year 12	2006	79,986	15.30	191.2	195.7
Year 13	2007	82,967	17.29	208.3	197.1
Year 14	2008	85,910	16.55	192.7	199.2
Year 15	2009	86,673	15.53	179.2	198.6
Year 16	2010	87,728	13.56	154.6	193.2
Base Daily per Capita Water Use					199.2

CWC §10608.22 provides that the 2020 target reduction shall be no less than 5 percent of the capita daily water use for a five-year period ending no earlier than December 31, 2007, and no later than December 31, 2010. Table 3-2 below is presented in accordance with DWR Guidance and shows the target reduction to 159.3 gpcd exceeds the reduction using the 5-year calculation.

Table 3-2: Base Daily per Capita Water Use – 5-Year Range

Base period year		Distribution System Population	Daily System Gross Water Use (MGD)	Annual Daily per Capita Water Use (gpcd)	Average GPCD – 5-Year (gpcd)
Sequence Year	Fiscal Year End				
Year 1	2004	70,668	14.91	211.0	
Year 2	2005	75,992	14.30	188.2	
Year 3	2006	79,986	15.30	191.2	
Year 4	2007	82,967	17.29	208.3	
Year 5	2008	85,910	16.55	192.7	198.3
95 Percent of Base Daily per Capita Water Use					188.4

3.2 Regional Alliance Target

As set forth above, SB7 requires each urban retail water supplier to develop an urban water use target and an interim urban water use target. Notably, SB7 authorizes urban retail water suppliers to determine and report progress toward achieving these targets on an individual agency basis or pursuant to a regional alliance as provided in CWC §10608.28(a). The DWR Guidebook and the DWR Methodologies provide guidance to urban retail water suppliers for purposes of forming and carrying out a regional alliance in accordance with CWC §10608.28(a) and related provisions of SB7. The DWR Guidebook and the DWR Methodologies provide that urban retail water suppliers are eligible to form a regional alliance in accordance with CWC §10608.28(a) if the suppliers meet at least one of several specified criteria, such as (1) the suppliers are recipients of water from a common wholesale water supplier, or (2) the suppliers are located within the same hydrologic region, which for purposes of a regional alliance refers to the 10 hydrologic regions as shown in the California Water Plan.

VWD has formed a regional alliance with OMWD, SDWD, and Rincon MWD pursuant to CWC §10608.28(a), the DWR Guidebook, and DWR Methodology 9 to cooperatively determine and report progress toward achieving their water use targets on a regional basis. All of these agencies are recipients of water from a common wholesale water supplier, in this case the San Diego County Water Authority (SDCWA), and all of the members are located within the South Coast Hydrologic Region as shown in the California Water Plan. Figure 3-1 illustrates the service areas of these agencies.

These agencies have entered into a cooperative agreement to establish and carry out a regional alliance, and they have jointly notified DWR of the formation of their regional alliance (this agreement is included in Appendix H). In accordance with the DWR Guidebook and DWR Methodologies, the members have prepared an urban water use target for the year 2020 and an interim urban water use target for 2015 for the region, which is further set forth in Table 3-3 below and within each of the other member's individual Urban Water Management Plans (UWMPs).

Furthermore, each member of the regional alliance has developed its own urban water use target for the year 2020 and interim urban water use target for the year 2015, along with other supporting data and determinations, all of which is included in each member's individual UWMP. These individual agency targets were created using Method 1 as set forth in CWC §10608.20(b)(1). VWD's individual interim and urban water use targets are set forth in Section 3.1 above. The regional alliance urban water use and interim urban water use targets are based on the weighted average, by population, of the agencies' individual urban water use and interim urban water use targets.

Table 3-3: Regional Alliance per Capita Daily Water Use Targets

VWD	2015	2020	2025	2030	2035
GPCD Target	179	159	159	159	159
Population Projection	96,123	98,001	105,428	109,751	112,007
20x2020 Demand Target (AF)	19,273	17,454	18,777	19,547	19,949

OMWD	2015	2020	2025	2030	2035
GPCD Target	319	283	283	283	283
Population Projection	66,993	67,987	69,003	71,101	72,095
20x2020 Demand Target (AF)	23,938	21,552	21,874	22,539	22,854

SDWD	2015	2020	2025	2030	2035
GPCD Target	180	160	160	160	160
Population Projection	40,515	41,870	44,271	45,531	46,425
20x2020 Demand Target (AF)	8,147	7,484	7,913	8,138	8,298

Rincon MWD	2015	2020	2025	2030	2035
GPCD Target	239	213	213	213	213
Population Projection	29,212	30,984	32,289	34,576	35,634
20x2020 Demand Target (AF)	7,820	7,392	7,704	8,250	8,502

REGIONAL ALLIANCE	2015	2020	2025	2030	2035
GPCD Target	227	201	201	201	201
Population Projection	232,843	238,842	250,991	260,959	266,161
20x2020 Demand Target (AF)	59,178	53,882	56,268	58,474	59,603

Figure 3-1: Regional Alliance Agencies

